

**Work Order ID 67792**

Wednesday, March 30, 2011 11:35:37 AM



Page 1

Item ID: D3510-041

Accept



Setup Start



Revision ID:

Item Name: Skidtube Insert Assembly

Start Date: 3/30/2011

Start Qty: 4.00



Cust Item ID:

Required Date: 4/4/2011

Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan:

H

Date: 11-03-30 Tooling:

Date:

Run Start



QC:

Date: \_\_\_\_\_ SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr	Revision Nbr
D3510	Rev C

100



MORI SEIKI CNC LATHE LARGE

0.00

Mori Seiki

Mori Seiki CNC Lathe Large

Memo

0.00

Turn as per Dwg D3510 & Folio FA652  
Ensure that DT8877A Plug fits in tube.

1 Q

MM.L 11/06/28

110



QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Quality Control

Memo

0.00

and 11/06/28

1 P



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 2

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_

Date: \_\_\_\_\_

Tooling: \_\_\_\_\_

Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_

Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_

Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center ID

120



HAAS 1

HAAS CNC vertical machine #1

Operation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

0.00

B.A 11/06/28

R Ø

0.00

~~QA~~ 11/06/28

0.00

1-Machine as per Folio FA652 and Dwg D3510

Memo

130



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

B.A 11/06/28

R Ø

0.00

Memo

140



QC

Quality Control

QC8- Inspect parts - second check

0.00

JW 11/06/29

0.00

R Ø

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Page 3

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Item Name: Skidtube Insert Assembly

Stop



Start Date: 3/30/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 4/4/2011 Req'd Qty: 4.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

150

Operation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Skidtubes

Skidtubes

Skidtubes

Skidtubes

Memo

0.00

1-DrillL .266" Dia hole using DT8877B as per Dwg D3510

2-Counter bore wearplate holes as per Dwg d3510.

3-open wearplatre holes to .297 as per Dwg D3510.

4-Deburr

0.00

160



QC5- Inspect part completeness to step on W/O

0.00

QC

Quality Control

Memo

0.00

Sulde/29

(42)

170



Chemical Conversion Coat per QSI005 4.1

0.00

HandFinish

Hand Finishing

Memo

0.00

2 φ 6/11-6-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**Work Order ID 67792**

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Page 4

Item ID: D3510-041

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Setup Start



Revision ID:

Item Name: Skidtube Insert Assembly

Stop



Start Date: 3/30/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 4/4/2011 Req'd Qty: 4.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180



QC

Quality Control

QC3- Inspect Part Finish

0.00

2 d 30 4/6/29

190



HandFinish

HandFinishing

0.00

2 d 30 4/6/29.

Hand Finishing

Memo

0.00

Install inserts as per Dwg D3510

200



QC

QC5- Inspect part completeness to step on W/O

0.00

Quality Control

Memo

0.00

Subtotal

(72) \_\_\_\_\_

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**Work Order ID 67792**

Page 5

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Item ID: D3510-041

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Setup Start



Revision ID:

Item Name: Skidtube Insert Assembly

Stop



Start Date: 3/30/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 4/4/2011 Req'd Qty: 4.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center ID

210



Packaging

Packaging

Operation  
Description

Identify as per dwg &amp; Stock Location:

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

0.00

220



QC

Quality Control

Memo

0.00

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action      Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Wednesday, March 30, 2011 11:35:43 AM

Page 1

Work Order ID: 67792



Parent Item: D3510-041



Parent Item Name: Skidtube Insert Assembly

Start Date: 3/30/2011

Required Date: 4/4/2011

Start Qty: 4.00

Required Qty: 4.00

Comments:

- IPP Rev:A New Issue 06-10-12 JLM
- IPP Rev:B ALES-1032 and ALS4-428 insert now used ECN 1036 DD
- IPP Rev:C Revised manufacturing steps for LG 08-09-29 Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6T3.500W.375		Purchased	No			100	f	0.0000	2.55	10.73684		<i>MML 11/06/29</i>	
--------------------	--	-----------	----	--	--	-----	---	--------	------	----------	--	---------------------	--

6061-T6 RD Tube 3.50 X .375 W													
-------------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--

ALS4-1032-225		Purchased	No			190	Each	1,325.000	6	24		<i>12. BL 11-6-29</i>	
---------------	--	-----------	----	--	--	-----	------	-----------	---	----	--	-----------------------	--

Insert													
--------	--	--	--	--	--	--	--	--	--	--	--	--	--

*117717*

Location                    Loc Qty                    Loc Code

FP-B                            224

110768                            224

ST282                            1101

110768                            1101

ALS4-428-165		Purchased	No			190	Each	61.0000	2	8			
--------------	--	-----------	----	--	--	-----	------	---------	---	---	--	--	--

Inserts													
---------	--	--	--	--	--	--	--	--	--	--	--	--	--

Location                    Loc Qty                    Loc Code

FP-B                            61

114172                            61

ALS7-1032-130		Purchased	No			190	Each	517.0000	2	8			
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Insert													
--------	--	--	--	--	--	--	--	--	--	--	--	--	--

Location                    Loc Qty                    Loc Code

ST282                            517

116800                            517

*ALS4-1032-130.*

*117717.*

*A. BL 11-6-29*

*8.*

*4. BL 11-6-29*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	67792
Description: Skidtube Insert	Part Number:	D3510-041
Inspection Dwg: D3510 Rev: C		Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

First Article     Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø3.300	+/-0.010	Ø3.309	✓		mirc	CNC-05
<del>Ø2.900</del>	+/-0.010	2.939	✓		vern	JF-01
Ø2.750	+/-0.010	2.750	✓		vern	JF-01
R0.25 x 0.066	+/-0.010	Ø2.5 x 0.066	✓		"	
15.00	+/-0.030	15.00	✓		tape	mm,L
0.063 x 45°	+/-0.010 x 0.5°	0.063 x 45°	✓		vern	JF-01
0.125 x 45°	+/-0.010 x 0.5°	0.125 x 45°	✓		vern	JF-01
5.270	+/-0.010	5.271	✓		vf	
3.265	+0.000/-0.010	3.265	✓		mirc	CNC-05
30.50	+/-0.030	30.490	✓		tape	mm,L
9.515	+/-0.010	9.516	✓		H-G	3100G
6.875	+/-0.010	6.875	✓		"	"
13.750	+/-0.010	13.750	✓		"	"
1.600	+/-0.010	1.600	✓		"	"
2.165	+/-0.010	2.165	✓		"	"
6.735	+/-0.010				"	"
2.981	+/-0.010				"	"
2.434	+/-0.010				"	"
1.036	+/-0.010				"	"
Ø0.266	+0.006/-0.001	Ø0.267	✓		vern	GA-01
Ø0.391	+/-0.010	Ø0.393	✓		"	"
Ø0.516 x 0.100	+/-0.010	Ø0.521 x 0.100	✓		"	"

Measured by:	MM,L/BP	Audited by:		Prototype Approval:	N/A
Date:	11/06/28	Date:	11-06-29	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	09.06.01	New Issue	KJ	

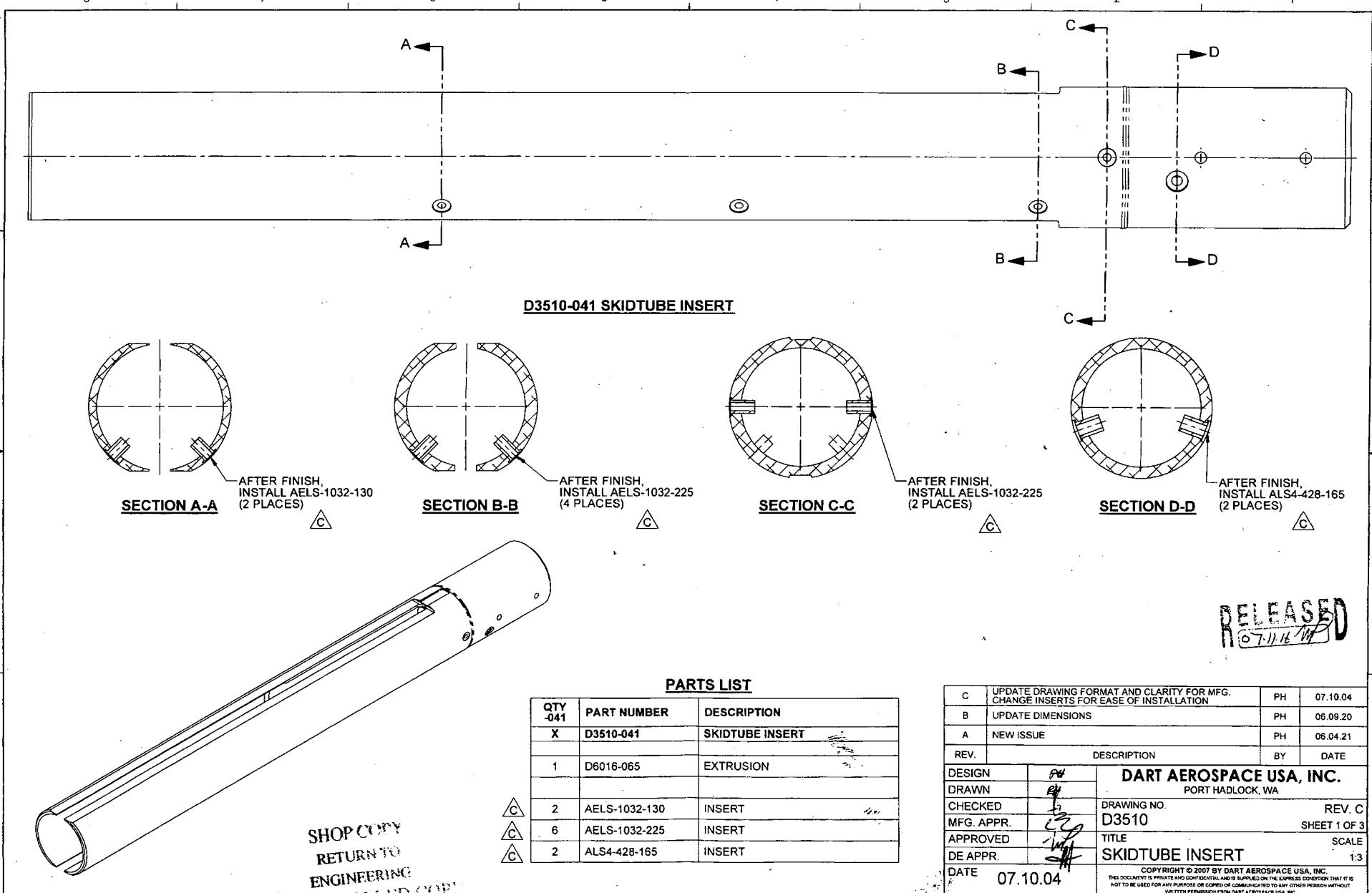
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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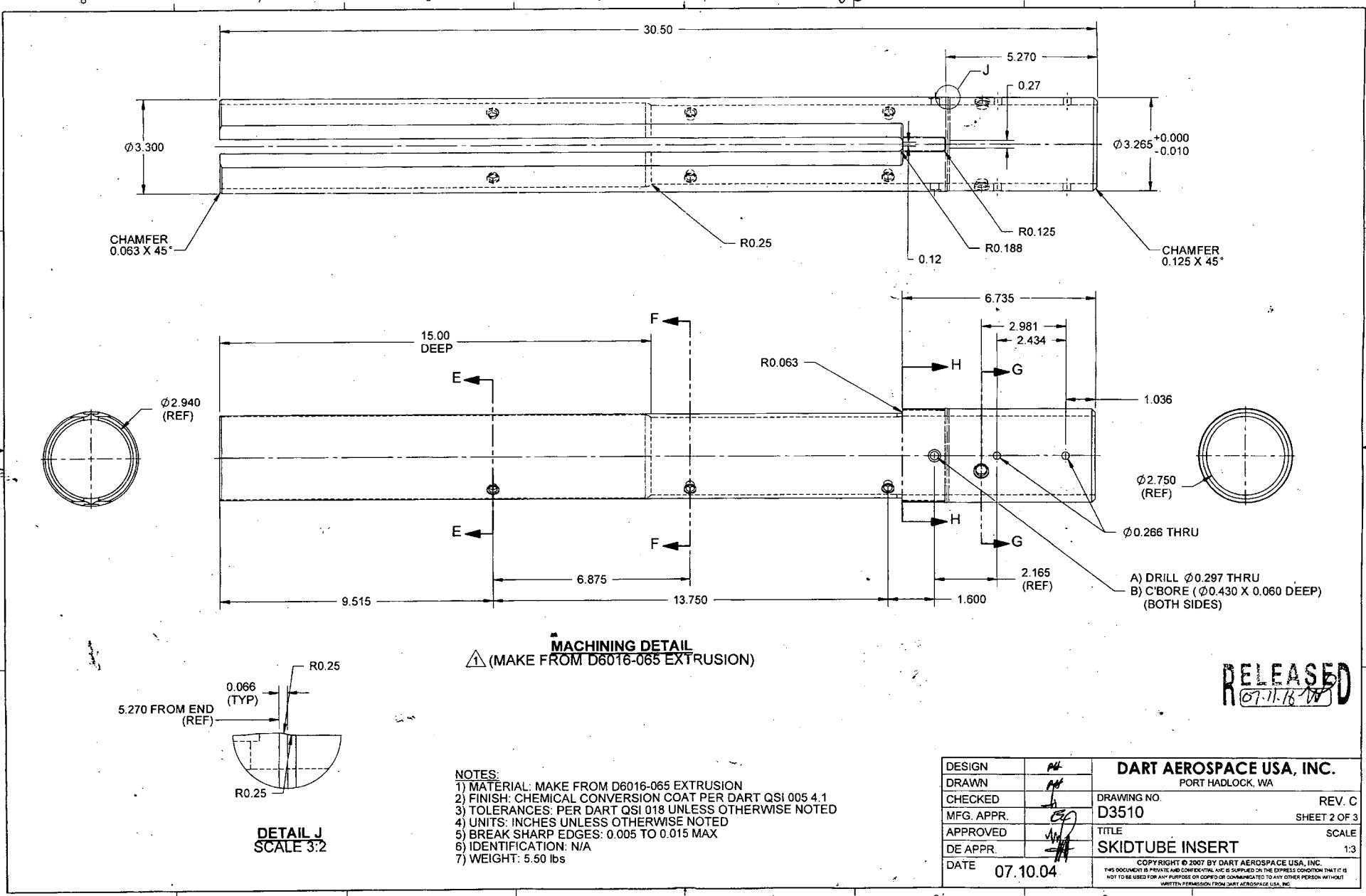
C	UPDATE DRAWING FORMAT AND CLARITY FOR MFG. CHANGE INSERTS FOR EASE OF INSTALLATION	PH	07.10.04
B	UPDATE DIMENSIONS	PH	06.09.20
A	NEW ISSUE	PH	06.04.21
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>PL</i>	DART AEROSPACE USA, INC.	
DRAWN	<i>PL</i>	PORT HADLOCK, WA	
CHECKED	<i>PL</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>PL</i>	D3510	SHEET 1 OF 3
APPROVED	<i>PL</i>	TITLE	SCALE
DE APPR.	<i>PL</i>	SKIDTUBE INSERT	1:3
DATE	07.10.04	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

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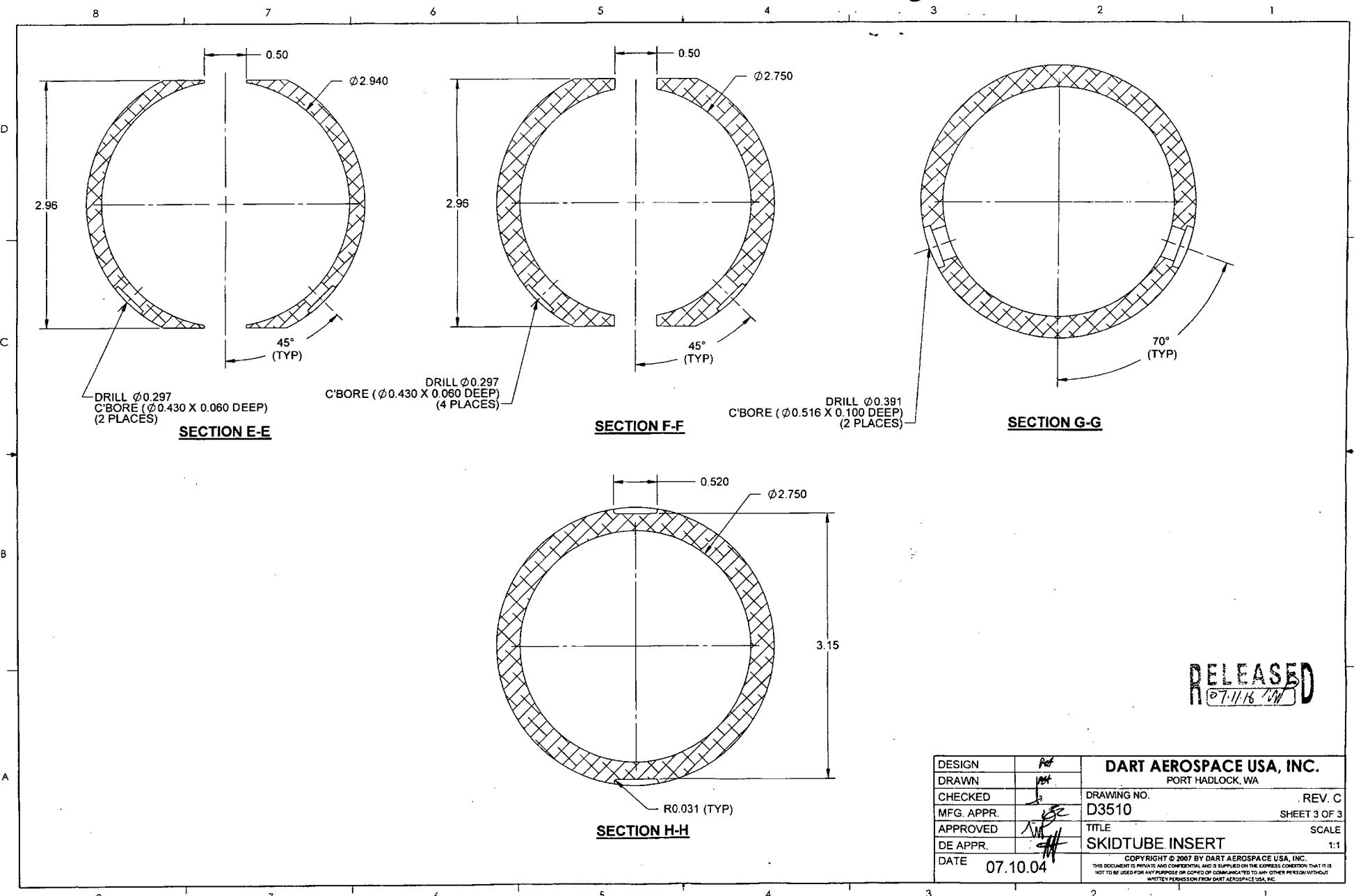
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W667292



RELEASED  
07.11.04

DESIGN	<i>AS</i>	DART AEROSPACE USA, INC.
DRAWN	<i>WT</i>	PORT HADLOCK, WA
CHECKED	<i>JL</i>	DRAWING NO. D3510 REV. C
MFG. APPR.	<i>SC</i>	SHEET 3 OF 3
APPROVED	<i>WT</i>	TITLE SKIDTUBE INSERT
DE APPR.	<i>WT</i>	SCALE 1:1
DATE	07.10.04	THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

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